



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,694	06/26/2001	Hiroyuki Sugimura	1508.65651	1760

7590 08/31/2005
Patrick G. Burns, Esq.
GREEN, BURNS, & CRAIN, LTD.
Suite 2500
300 South Wacker Dr.
Chicago, IL 60606

EXAMINER

NGUYEN, HOAN C

ART UNIT PAPER NUMBER

2871

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,694

Applicant(s)

SUGIMURA ET AL.

Examiner

HOAN C. NGUYEN

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I and Species A (claims 1-3) in the reply filed on 15 July 2005 is acknowledged.

Applicant canceled claims 4 and 6-13.

Claim 5 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 15 July 2005.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiyuki et al. (JP07-128674) and Tsuchiya et al. (US6575564B1).

Yoshiyuki et al. teach a liquid crystal display device manufacturing method comprising the steps of:

- forming a sealing member 10 along a periphery of a display area on a first surface of a first substrate 7;
- dropping a liquid crystal to the first surface of the first substrate 7 from a liquid crystal supply needle (tip of syringe) provided to a syringe 5, in which the liquid crystal is filled;
- causing a portion of the liquid crystal, which has adhered to a surface of the liquid crystal supply needle/tip, to fall onto the first substrate;

However, Yoshiyuki et al. fail to disclose a liquid crystal display device manufacturing method comprising the step of blowing a gas against the liquid crystal supply needle either during or after said dropping the liquid crystal step with features of claims 2-3.

Tsuchiya et al. teach (Fig. 3) a Ink Jet recording method including the step of blowing a gas 16a against the liquid crystal needle with force and arranged around the supply needle/tip. The ink jet recording method may be used for filling or dropping liquid crystal onto substrate since the liquid crystal is the viscous substance or the liquid composition. Therefore, a liquid crystal display device manufacturing method comprising the step of blowing a gas with external force 16a against the liquid crystal supply needle/tip either during or after said dropping the liquid crystal step for preventing spreading or controlling the discharge amount of the viscous or liquid crystal substance (col. 4 lines 10-11 and lines 17-18).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a liquid crystal display device manufacturing method comprising the step of blowing a gas with external force 16a against the liquid crystal supply needle/tip either during or after said dropping the liquid crystal step for preventing spreading or controlling the discharge amount of the viscous or liquid crystal substance, as taught by Tsuchiya et al. (col. 4 lines 10-11 and lines 17-18).

2. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiyuki et al. (JP07-128674) and Kurihara et al. (US6051175A).

Kurihara et al. teach a liquid crystal display device manufacturing method comprising the step of:

- forming a sealing member 10 along a periphery of a display area on a first surface of a first substrate 7;
- dropping a liquid crystal to the first surface of the first substrate 7 from a liquid crystal supply needle (tip of syringe) provided to a syringe 5, in which the liquid crystal is filled;
- causing a portion of the liquid crystal, which has adhered to a surface of the liquid crystal supply needle/tip, to fall onto the first substrate;

However, Yoshiyuki et al. fail to disclose a liquid crystal display device manufacturing method comprising the step of blowing a gas against the liquid crystal

Art Unit: 2871

supply needle either during or after said dropping the liquid crystal step with features of claims 2-3.

Kurihara et al. teach a liquid crystal filament manufacturing method comprising the step of blowing a gas 5 against the liquid crystal needle with force and arranged around the supply needle/tip 3. This liquid crystal filament manufacturing method may be used to form the liquid crystal layer with blowing a gas against the liquid crystal needle with force and arranged around the supply needle/tip for improving affinity and uniform miscibility (col. 4 lines 37-39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a liquid crystal display device manufacturing method comprising the step of blowing a gas with external force 16a against the liquid crystal supply needle/tip either during or after said dropping the liquid crystal step for preventing spreading or controlling the discharge amount of the viscous or liquid crystal substance, as taught by Kurihara et al. (col. 4 lines 37-39).

Conclusion

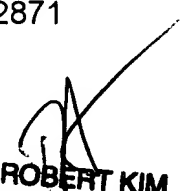
Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim H. Robert can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

chn

HOAN C. NGUYEN
Examiner
Art Unit 2871


ROBERT KIM
SUPERVISORY PATENT EXAMINER